COMPLETE LISTING OF THE CLAIMS

The following lists all of the claims that are or were in the above-identified patent application.

Claims 1 to 6 are canceled.

7. (Currently Amended) An interferometer comprising:

a source of a heterodyne beam;

a beam splitter positioned to split the heterodyne beam into a first beam and a second beam having different frequencies;

a first AOM in a path of the first beam, the first AOM operating to increase a difference between frequencies of the first and second beams;

interferometer optics that generate measurement and reference beams from ~~the first and second beams~~ a recombined heterodyne beam; and

a beam-combining unit positioned to receive the first and second beams and provide [[a]] the recombined heterodyne beam to the interferometer optics, wherein the beam combining unit comprises:

a beam combiner;

a first optic cable assembly that carries the first beam;

a second optic cable assembly that carries the second beam to the beam combiner; and

a first manipulator on which the first fiber optic cable assembly is mounted, the first manipulator being adjustable to control a direction of the first beam upon exit from the first fiber optic cable assembly, wherein adjustment of the first manipulator controls an incident angle of the first beam on the beam combiner.

8. (Previously Presented) The interferometer of claim 7, wherein the beam-combining unit further comprises a second manipulator on which the second fiber optic cable assembly is mounted, the second manipulator being adjustable to control a direction of the second beam upon exit from the second fiber optic cable assembly, wherein adjustment of the second manipulator controls an incident angle of the second beam on the beam combiner.

9. (Original) The interferometer of claim 7, wherein the first manipulator is further adjustable to translate the first beam upon exit to control an incident location of the

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first beam on the beam combiner.

Claims 10 to 29 are canceled.

30. (Previously Presented) The interferometer of claim 7, further comprising a second AOM in a path of the second beam, the second AOM changing a frequency of the second beam.

31. (Previously Presented) The interferometer of claim 7, wherein the source of the heterodyne beam comprises:

a laser; and

an optical element in a path of the heterodyne beam between the laser and the beam splitter, wherein in the heterodyne beam exiting the optical element, a first frequency component has a first frequency and a first linear polarization and a second frequency component has a second frequency and a second linear polarization that is orthogonal to the first linear polarization.

32. (Previously Presented) The interferometer of claim 31, wherein the laser employs Zeeman splitting to provide the heterodyne beam with frequency components respectively having the first frequency and the second frequency.

33. (Previously Presented) The interferometer of claim 31, wherein the beam splitter is a polarizing beam splitter that uses the first and second linear polarizations of the first and second components to separate the first and second components and split the heterodyne beam into the first and second beams.

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